

REPAIRING BODY PANELS/FENDERS

Pierce County Careers Connection Dual Credit Articulation Agreement

Upon completion of high school courses equivalent to the following competencies:

- Identify Fillers, Sealers, and Abrasives.
Given oral discussion and/or practical application problems, and/or written test, the student will identify:

Fillers

- Special stain free filler for clear coat finishes
- Silver metal filled polyester filler
- Light weight polyester filler
- High strength glass-fiber reinforced polyester filler
- Epoxy filler/adhesive
- Urethane repair materials
- Polyester finishing and glazing putty
- Spray-on fillers include high solids primer surfacers with MEK, acid or urethane activators
- Self etching primers for use over bare metal

Sealers

- Epoxy first-coat primers and sealers for moisture hold out
- Tintable sealers for use under color coats to aid in color matching
- Clear and tinted sealers for improves adhesion of top coats

Abrasives

- Grinder discs in 5", 6" and 8" sizes in 24, 36, 50, 80, and 100 grits
- Panel sander/hand file sandpaper strips in 36, 40, 80, 120, 150, 180, 220, and 240 grits
- D-A orbital sander discs in 5", 6", and 8" sizes in 26, 40, 80, 120, 150, 220, 240, 320, and 420 grits
- Wet or dry sandpaper sheets and rolls in 120, 150, 220, 360, 400, 600, 800, 1000, 1200, 1500, 2000, 2500, and 3000 grits

- Procedures for Mixing Body Fillers
 Grits (various types)
 Sizes of Sandpaper
 Grinding Discs
 Identify and Demonstrate Appropriate Use of the Following Tools:

Power Tools

- Plasma cutter
- Oxyacetylene torch
- Electric shears
- Pneumatic chisel
- Pneumatic cut-off saw
- Mig welder
- Weld-on stud gun
- Airless plastic welder
- Pneumatic drill: ¼ inch
- Electric drill: 3/8 inch
- Electric drill ½ inch
- Hydraulic jacking units
- Pneumatic orbital sander: 6 inch round, 9 inch round
- Pneumatic orbital panel sander
- Pneumatic straight-line panel sander
- Dusting gun (blow gun)

Power Tools (cont'd):

- Electric sander/grinder
- Pneumatic polisher
- HVLP-spray gun
- Pneumatic spray gun washer

Hand Tools:

- Tape measure
- Straight-edge
- Tram gauges
- Body hammers: rough-out, shrinking and finishing
- Dolly blocks: various shapes
- Curved pry-bars, picks and punches
- Body spoons: in different sizes and contours
- Slide hammer dent remover
- Body files: flat, half-round, adjustable
- Vice grips: large and small, vice grip C" clamps large and small
- Welding clamps
- Putty knife
- Sure-form file
- Hand sanding blocks: long, short, hard, and soft
- Headlight aiming tool

Mechanics Tools:

Sockets

- ¼ inch drive socket set 5/32 inch - ½ inch standard, metric 4mm - 14mm
- 3/8 inch drive socket set 1/4 inch - 7/8 inch standard, metric 6mm - 22mm
- 1/2 inch drive socket set 3/8 inch - 1 1/4 inch standard, metric 10mm - 22mm
- 3/4 inch drive socket set 7/8 inch - 2-3/8 inch
- Hex bits 3/16 inch - 3/8 inch
- Torque bits sizes 15 - 25
- Above includes Ratchets, Extension bars, Adapters, Universal

Wrenches

- Combination standard ¼ inch - 1 5/16 inch, metric 6mm - 32mm
- Open-end standard ¼ inch - 1-5/8 inch, metric 6mm - 32mm
- Box-end standard ¼ inch - 1-1/2 inch, metric 6mm - 32mm
- Nutdrivers: 3/16 inch - ½ inch
- Pliers: hose clamp, 6 inch bent needle nose, 6 inch and 8 inch long nose, 6 inch locking pliers, 7 ½ inch and 10 inch curved jaw

Miscellaneous Tools

- Screwdrivers: 7 inch Phillips, 11 inch slotted
- Files: round, half-round, flat mill
- Tap and die set: standard and metric
- Hacksaw: with 10 blades
- Ball-peen hammers: 8, 12, and 32-oz
- Hand impact driver set: 6 piece
- Screw extractor kit: 5 piece
- Steering wheel puller set: 11 piece

- Fill and Smooth Depressed Areas with Body Filler
- Given a vehicle or vehicles with a minimum of three (3) roughed out panels, fill and smooth depressed area to original contour.

- Remove and Install Weld-in Panel
- Remove damaged panel and install replacement.
- Replacement panel must be aligned to conform to the original body contour.*

- Patching and Filling Rusted Out Areas
- Remove the damaged area and cut out and shape a new patch panel.
- The panel must be welded in place and finished to original contour.*

- Repair Fiberglass
- Given a fiberglass panel requiring repair:
- Remove damaged material
 - Fill damaged area with proper mixture of resin and fiberglass and finish to original contour

A student earning a “C” grade or better may earn college credit at the following college:

<u>College</u>	<u>Course</u>	<u>Credits</u>
Bates Technical College	AUTOB 103	3
	AUTOB 104 (CIP Code: 47.0603)	5